

**ANESTHESIA  
& ANALGESIA****PLEASE SIGN THE  
GUESTBOOK**

QUICK SEARCH: [advanced]

Author: Keyword(s):

Go

Year:

Vol:

Page:

[HOME](#) [HELP](#) [FEEDBACK](#) [SUBSCRIPTIONS](#) [ARCHIVE](#) [SEARCH](#) [TABLE OF CONTENTS](#)[JAMES RICH, CRNA](#) [Change Password](#) | [View/Change User Information](#) | [CiteTrack Personal Alerts](#) | [Subscription HELP](#) | [Sign Out](#)

Anesth Analg 2003;96:1841-1842

© 2003 [International Anesthesia Research Society](#)**LETTERS TO THE EDITOR****Anesthetic Considerations for Bariatric  
Surgery: Proper Positioning is Important  
for Laryngoscopy****Jay B. Brodsky, MD, Harry J. M. Lemmens, MD, John G. Brock-Utne, MD,  
Lawrence J. Saidman, MD, and Richard Levitan, MD**Department of Anesthesia, Stanford University Medical Center, Stanford, CA Department of Emergency Medicine,  
University of Pennsylvania School of Medicine, Philadelphia, PA

To the Editor:

Although we appreciate the reference to our study on tracheal intubation in morbidly obese patients (1), the recent comprehensive review of anesthetic considerations for bariatric surgery by Ogunnaike et al. misses a key point (2).

One of the most important criterion for insuring successful direct laryngoscopy and tracheal intubation in this population is patient position. The recommendation that the shoulders and head be elevated so the tip of the chin is *just* higher than the chest may not maximize the view during laryngoscopy (2,3). It is essential that the morbidly obese patient be placed with the head, upper body, and shoulders significantly elevated above the chest. One of the authors (RL), has described an easily visible parameter, that is, an imaginary *horizontal* line should connect the patient's sternal notch with the external auditory meatus (Fig. 1).

[View larger version \(136K\):](#)

Figure 1. A morbidly obese patient will be in position for direct laryngoscopy when an imaginary horizontal line can be drawn from the sternal notch to the external auditory meatus. To achieve this, the upper body and head should be significantly elevated with pillows, blankets, or towels. Reproduced from Airway Cam Video Series, Volume 3: Advanced Airway Imaging and Laryngoscopy Techniques, published by Airway Cam Technologies, Inc., Wayne, PA. Used by permission.

- ▶ [Reprint \(PDF\) Version of this Article](#)
- ▶ [Email this article to a colleague](#)
- ▶ Similar articles found in:
  - [A&A Online](#)
  - [PubMed](#)
- ▶ [PubMed Citation](#)
- ▶ Search Medline for articles by:
  - [Brodsky, J. B.](#) || [Provost, D.](#)
- ▶ Alert me when:
  - [new articles cite this article](#)
- ▶ [Download to Citation Manager](#)

[\[in this window\]](#)  
[\[in a new window\]](#)

With our patients in this position, we successfully intubated the tracheas of 99 of 100 morbidly obese patients by direct laryngoscopy (1). In the same issue of *Anesthesia & Analgesia*, Keller et al. reported a 97% success rate with direct laryngoscopy in obese and morbidly obese patients (4). Although successful tracheal intubation was similar in both studies, there were 9 patients (15%) who required a bougie, and in only 20 patients (33%) was a Cormack Grade I view (5) present in the Keller study. In contrast, none of our patients required a bougie, and 75% had a Cormack Grade I view during laryngoscopy. Keller et al. elevated their patients' heads only 8 cm prior to laryngoscopy (4).

We believe it is essential that morbidly obese patients be positioned correctly in order to maximize the view during direct laryngoscopy for tracheal intubation.

## References

1. Brodsky JB, Lemmens HJM, Brock-Utne JG, et al. Morbid obesity and tracheal intubation. *Anesth Analg* 2002; 94: 732-6. [\[Abstract/Free Full Text\]](#)
2. Ogunnaike BO, Jones SB, Jones DB, et al. Anesthetic considerations for bariatric surgery. *Anesth Analg* 2002; 95: 1793-805. [\[Free Full Text\]](#)
3. McCarroll SM, Saunders PR, Brass PJ. Anesthetic considerations in obese patients. *Prog Anesthesiol* 1989; 3: 1-12.
4. Keller C, Brimacombe J, Kleinsasser A, Brimacombe L. The Laryngeal Mask Airway™ as a temporary ventilatory device in grossly and morbidly obese patients before laryngoscope-guided tracheal intubation. *Anesth Analg* 2002; 94: 737-40. [\[Abstract/Free Full Text\]](#)
5. Cormack RS, Lehane J. Difficult tracheal intubation in obstetrics. *Anaesthesia* 1984; 39: 1105-11. [\[ISI\]](#)[\[Medline\]](#)

---

## Response

**Babatunde O. Ogunnaike, MD, Stephanie B. Jones, MD, Charles W. Whitten, MD, Daniel B. Jones, MD, and David Provost, MD**

University of Texas Southwestern Medical Center at Dallas, Dallas, TX

### In Response:

We appreciate the comments of Brodsky et al. regarding our recent review article on anesthetic considerations for bariatric surgery (1), with particular emphasis on the issue of positioning for successful direct laryngoscopy and tracheal intubation in morbidly obese patients.

While it may be true that merely elevating the head and shoulders so that the tip of the chin is just higher

than the chest may not maximize the laryngoscopic view for endotracheal intubation, we mentioned this fact because of documentation that this positioning is better than maintaining a totally flat position during laryngoscopy (2,3). However, we did not specifically mention how much higher than the chest the tip of the chin should be elevated, and the words "just higher" were certainly not implied in our review article.

We appreciate your providing information about an easily visible parameter to facilitate laryngoscopy in the morbidly obese as described by one of your authors, in which an imaginary horizontal line to connect the patient's sternal notch with the external auditory meatus is used as a landmark to facilitate laryngoscopy. We have also observed that the higher the elevation of the head and chest, the easier laryngoscopy and intubation become in the morbidly obese patient. Thank you for the letter.

## References

1. Ogunnaik BO, Jones SB, Jones DB, et al. Anesthetic considerations for bariatric surgery. *Anesth Analg* 2002; 95: 1793 805.[[Free Full Text](#)]
2. Ogunnaik BO, Whitten CW. Anesthetic management of morbidly obese patients. *Semin Anesth* 2002; 21: 46 58.
3. Keller C, Brimacombe J, Kleinsasser A, Brimacombe L. The Laryngeal Mask Airway™ as a temporary ventilatory device in grossly obese patients before laryngoscope-guided tracheal intubation. *Anesth Analg* 2002; 94: 737 40.[[Abstract/Free Full Text](#)]

- ▶ [Reprint \(PDF\) Version of this Article](#)
- ▶ [Email this article to a colleague](#)
- ▶ Similar articles found in:
  - [A&A Online](#)
  - [PubMed](#)
- ▶ [PubMed Citation](#)
- ▶ Search Medline for articles by:
  - [Brodsky, J. B.](#) || [Provost, D.](#)
- ▶ Alert me when:
  - [new articles cite this article](#)
- ▶ [Download to Citation Manager](#)

---

[HOME](#) [HELP](#) [FEEDBACK](#) [SUBSCRIPTIONS](#) [ARCHIVE](#) [SEARCH](#) [TABLE OF CONTENTS](#)

### A&A Affiliated Societies

[Society of Cardiovascular Anesthesiologists](#)

[Society for Pediatric Anesthesia](#)

[Society for Ambulatory Anesthesia](#)

[Society for Technology in Anesthesia](#)

[International Society for Anaesthetic Pharmacology](#)